

Title (en)

Mobile satellite communications system using multiple earth stations

Title (de)

Mobile Satellitenkommunikationsanordnung, mehrere irdische Stationen verwendend

Title (fr)

Système de communication mobile par satellite utilisant de multiples stations terrestres

Publication

EP 1482659 A3 20050518 (EN)

Application

EP 04020849 A 20010709

Priority

- EP 01957123 A 20010709
- US 61663700 A 20000726

Abstract (en)

[origin: WO0209318A2] A satellite communications system uses multiple ground station and one or more stellites for communicating between mobile subscribers and a land-based communications network, such as the PSTN or the Internet. Multiple ground stations geographically dispersed minimize tool charges incurred routing calls from a mobile subscriber through the land network by reducing the need for long-distance calling. Further, because each ground station communicates with a given satellite using the same frequency spectrum, the subscriber capacity of the system increases and/or bandwidth requirements for the communications link between ground stations and satellites may be reduced. The present system uses ground-based beamforming techniques enabling each satellite to transmit signal in multiple transmission beams, each beam supporting one or more mobile subscribers. Each beam may reuse the same frequency spectrum, thereby increasing the number of subscribers supported by each satellite. Multiple ground stations cooperatively relay signals through a given satellite in a manner complementary with ground-based beamforming.

IPC 1-7

H04B 7/185; **H04B 7/212**

IPC 8 full level

H04B 7/185 (2006.01)

CPC (source: EP US)

H04B 7/18515 (2013.01 - EP US)

Citation (search report)

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- [A] US 4218654 A 19800819 - OGAWA AKIRA [JP], et al
- [A] US 6005515 A 19991221 - ALLEN BARRY R [US], et al
- [A] EP 0877444 A1 19981111 - NORTHERN TELECOM LTD [CA]
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